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ABSTRACT

This module on owning and operating an energy specialist service is one of 36 in a series on entrepreneurship. The introduction tells the student what topics will be covered and suggests other modules to read in related occupations. Each unit includes student goals, a case study, and a discussion of the unit subject matter. Learning activities are divided into individual activities, discussion questions, and a group activity. Units (and subject matter) in this module are planning your business (services, customers, competition; personal qualities; legal requirements; how to compete well); choosing a location (customers nearby; area; space; building; rent); getting money to start (business description; statement of financial need; meeting with the loan officer); being in charge (hiring; matching people and tasks; training); organizing the work (work orders; work schedules); setting prices (costs for materials; demand for services; competition; operating expenses; profit); advertising and selling (plan your advertising; ways to advertise; "people" ads; how to design printed ads); keeping financial records (customer billing form; daily cash sheet); and keeping your business successful (profit/loss statement; change your business to increase sales). A summary and quiz complete the document. (A teacher's guide is available for this module.) (CT)

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Entrepreneurship Training Components

GETTING DOWN TO BUSINESS:

Energy Specialist Service

Module 29

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GETTING DOWN TO BUSINESS:

Energy Specialist Service

Pamela G. Colby

April 1981

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INTRODUCTION

How are you going to use your job skills after you finish school?

Have you ever thought about starting your own energy specialist service?

This module describes people who have started and managed an energy specialist service. It gives you an idea of what they do and some of the special skills they need. You will read about

- planning an energy specialist service
- choosing a location
- getting money to start
- being in charge
- organizing the work
- setting prices
- advertising and selling
- keeping financial records
- keeping your business successful

You will also have a chance to practice some of the things that energy specialist service owners do.

Then you will have a better idea of whether a career as an energy specialist service owner is for you.

Before you study this module, you may want to read Module 1, Getting Down to Business: What's It All About?

When you finish this module, you might want to read
Module 27, Getting Down to Business: Guard Service;
Module 28, Getting Down to Business: Pest Control Service.

These modules are related to other businesses in the technical area.

UNIT 1

Planning an Energy Specialist Service

Goal: To help you plan your energy specialist service.

Objective 1: Describe the services, customers, and competition of an energy specialist service.

Objective 2: List three personal qualities an energy specialist service owner might have.

Objective 3: List two ways to help your service "stand out" from its competition.

Objective 4: List two special legal requirements for running an energy specialist service.

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SALLY AND MIKE O'TOOLE PLAN AN ENERGY SPECIALIST SERVICE

Sally and Mike O'Toole are licensed building contractors. They have owned their own contracting business for five years. They met when they were going through a solar apprenticeship program offered by the sheetmetal union in their area.

Sally and Mike are very interested in energy conservation. Each year, more of the homes they build use passive or active solar devices for part of their energy needs. Sally and Mike want to help people make the best use of the energy available to them. They think many people could save energy. And they could use it better if they got advice on what to do.

Sally and Mike decide to start an energy specialist service. It will help people save energy and use it wisely. They plan to offer two main services. One will be an energy audit. This will help people figure out how they can save energy in their homes or businesses. The other will be a solar service. It will install and maintain energy-saving solar devices.

The O'Tooles know they have the right background for their service. They both have skills and experience in sheetmetal work, plumbing, carpentry, electrical systems, insulation, heating and air conditioning, and solar installation. They know how to estimate the cost of jobs and run a business.

Their next step is to call their state licensing agency. They want to find out what licenses they need. They know there are state and federal regulations for energy auditors. There are also local, state, and federal tax credit programs to encourage people to use solar devices. The O'Tooles make sure they understand all the regulations and programs that relate to their service.

Planning an Energy Specialist Service

When you plan your service, you should:

1. decide what your services, customers, and competition will be;
2. decide if you have the personal qualities to run an energy specialist service;
3. decide what you will do to "stand out" from your competition; and
4. learn the legal requirements for running your service.

Services, Customers, and Competition

Energy conservation is a necessary service. Helping people save and use energy wisely is important. You should think about what services you will offer, who your customers will be, and what your competition offers.

Services. There are federal, state, and local plans to help regulate energy use. Your service can help make these plans work. For example, read about the two main services Sally and Mike offer:

1. Energy audit--In the O'Tooles' area, the utility company does "Weatherization Audits" for customers. The company examines customers' homes and tells them how they can save more energy. But the company doesn't have enough staff to do all the audits. The company "subcontracts" with the O'Tooles to do many of the audits.

   Also, city and county building officials require "environmental systems" audits when homes are sold. The roof and plumbing are the main things audited. The O'Tooles offer to do a more complete energy audit.

Many businesses also want energy audits of their buildings. The O'Tooles' service can help them keep their energy costs down.

What do Sally and Mike do in their energy audits? They examine the insulation, heating and air conditioning, and electrical system. They tell customers where they are losing energy, and how to save it.

2. Solar service--The prices of heating oil, natural gas, and electricity are high. There are federal, state, and local tax credit programs for those who use solar methods to help meet their energy needs. In their solar service, the O'Tooles will recommend, install, and maintain solar systems for customers.

With some solar devices, the back-up system is more complex than the solar installation. Solar devices and back-up systems need qualified maintenance. The O'Tooles will provide this.

Customers. Anyone who wants to save energy is a potential customer for an energy specialist. Homes and businesses can both use your services.

People building new homes and businesses will want to design them with solar access for passive solar energy. Devices for active solar energy can be installed in new or existing homes and businesses.

Homes and businesses can both use energy audits, too. Your service will help them save money by showing them how to save energy.

Competition. It's hard to predict how much competition you will have. Many people in the construction trades are learning about solar energy devices. However, you will be an energy specialist offering a wide range of energy services. Your service may even be a "pioneer" in your area.

Personal Qualities

These personal qualities will help you run your service:

- a desire to help people save energy;
- concern for the environment;
- skills and experience in the construction trades;
- skills and experience in solar energy methods; and
- business skills and experience.

You can plan now to develop the personal qualities you need.

How to Compete Well

Here are three ways you can "stand out" from your competition:

New services. Point out to customers that you are an energy specialist. You are offering new services that make you different from housing contractors.

Special services. Offer special services in addition to your basic ones. For example, buy an infrared scanner for insulation heat loss detection. Offer this as a special service for customers who want it.

Special business image. Create an image for your service that will stand cut in people's minds. Emphasize that you are a professional specialist in energy conservation. Point out that your service will help customers save money by saving energy.

Legal Requirements

Contact your state and local licensing agencies to learn what is required to run your service. Some cities require their own contractor license in addition to the state license. Your legal requirements may include a:

- business operator's license;
- state contractor license;
- local contractor license; and
- building permit for some types of work.

If you do energy audits, you should contact your state energy office to learn the regulations for energy auditors. You will probably have to meet both federal and state requirements. The state's requirements may be tougher.

You will also need insurance to protect the public, property owners, and you. An insurance broker with experience in contractor coverage can advise you. Basic coverage might include worker's compensation, product, fire and hazard, accident, damage, and vehicles.

Summary

It takes careful planning to get any business off to a good start. You now know some things to consider when you plan your energy specialist service.

Learning Activities

Individual Activities

1. Call two or more housing contractors in your area. Ask if they install solar energy devices in houses they build. If they do, ask if they got special solar training, and--if so--what kind. Decide if they would be competition for your service.

2. Call or write your state energy office. Ask what the regulations are for energy auditors. List them. Ask questions about any you don't understand.

3. Contact your state licensing agency. Describe the energy specialist service you plan to start. Ask what legal requirements you must meet. Ask questions about any you don't understand. Make a list of the requirements.

4. Below are personal qualities that will help you run an energy specialist service. Put a check by each quality you have now. For those you don't have now, think about ways to develop them.

   _____ A desire to help people save energy
   _____ Concern for the environment
   _____ Skills and experience in construction trades
   _____ Skills and experience in solar energy methods
   _____ Business skills and experience

5. Write a paragraph about how you plan to make your service "stand out" from its competition.

Discussion Questions

1. Who are potential customers for an energy specialist service?

2. Sally and Mike decide their two main services will be an energy audit and a solar service. Do you think these are good choices? Why, or why not?

3. Do you think Sally and Mike are planning their service well? Why, or why not?

Group Activity

Invite someone from your state energy office to visit your class. Ask that person to describe the state's energy conservation programs. Discuss with the person how the energy specialist services you plan can fit in with the state programs.

UNIT 2

Choosing a Location

Goal: To help you choose a location for your service.

Objective 1: List three things to think about in deciding where to locate your service.

Objective 2: Pick the best location for an energy specialist service from three choices.

THE O'TOOLES PICK A LOCATION

Sally and Mike live in an area that has many sunny days. They know many people in the area want to use solar energy. Now they decide to pick the exact location for their service.

Sally and Mike look at newspaper ads of offices for rent. They run their building contractor business from their home. But they want an office for their new service. An ad for "the cheapest rent in town" catches their attention. The office turns out to be in a run-down part of town. Several businesses nearby have closed recently.

Next they visit a new shopping center with office space for rent. Many people would see their office there. But the shopping center is on the edge of town. It serves only one neighborhood. The O'Tooles want to be in a more central location.

Then the O'Tooles visit an office near homes and businesses. There are several small shops and professional services nearby. Many people shop or pass through the area each day. There is a large equipment storage area. There is space for a private office, too. The building is in good condition. The whole area is clean and attractive. The O'Tooles can afford the rent. So they decide to locate there.

Choosing a Location

There are several things to consider when you pick a location for your service. Here are questions the O'Tooles ask themselves about each location they visit.

- Are there enough customers nearby?
- What is the area like?
- Is there enough space to run our service?
- Is the building in good condition?
- Can we afford the rent?

Read on to learn more about each question.

Customers Nearby

The O'Tooles are right that many people would see their office in a new shopping center. But the shopping center is on the edge of town and serves only one neighborhood. The O'Tooles want a location near as many potential customers as possible.

A more central location would give them quick access to many parts of town. Also, it's likely that many people pass through a central location each day. Anyone who sees their office is a potential customer.

Area

The office with "the cheapest rent in town" is in a run-down area. The O'Tooles will probably visit customers more often than customers will visit their office. Even so, a run-down area won't help their service "image." They don't want customers to think their service is run-down.

Also, several businesses nearby have closed recently. That tells Sally and Mike it may not be a good area for business. They know many businesses fail. But they want to start their service in an area where others are doing well.

The location they pick, near homes and businesses, is clean and attractive.

Space

Decide how many square feet you need for your office. Like the O'Tooles, you will need an equipment storage area. If you plan to hire a secretary, you may want a reception area. You will probably want a private office for yourself. There you can do paperwork and meet with customers.

Building

Choose a building that is in good condition. You want your service to look professional. Also, you don't want to have to worry about problems such as plumbing and electricity. The building does not have to be brand new to be in good condition.

Rent

Rent costs vary depending on the location. Check several offices in the area to see what is the average rent. Then decide if you can afford it. Your service doesn't need expensive office decorations. Remember, you will visit customers more than they visit you.

Summary

When you pick a location for your service, ask yourself these questions.

- Is it near my customers?
- Will the area help my service "image"?
- Is there enough space?
- Is the building in good condition?
- Can I pay the rent?

If you answer "yes" to all the questions, it is probably a good location.

Learning Activities

Individual Activities

1. Get a city map from your Chamber of Commerce or city planning department. Pick a location with homes and businesses. Visit the location. Decide if it would be a good place to locate your energy specialist service.

2. Look up newspaper ads for offices to rent. Choose two or more near neighborhoods where your service might find customers. Find out the number of square feet for each, and the rent. Decide if someone starting a service like yours could afford the rent.

   If you can, visit the offices. See if they have space for everything you need. Also decide if the buildings are in good condition.

3. Visit a part of town that you think is a good location for an energy specialist service. Write down a description of the area. For example, describe what the homes look like, and what the businesses are. Or draw a picture of the area.

4. Look up the addresses of solar energy equipment companies in the Yellow Pages. They sell solar systems and products you may use in your service. Visit one or more, and decide if you think they are in good locations.

5. Interview one or more solar company owners. Ask them why they picked the locations they did. Ask them if they are satisfied with their locations.

Discussion Questions

1. Do you think the O'Tooles picked a good location for their service? Why, or why not?

2. Pretend the shopping center they looked at was in a more central location. Would that be a good location for their service? Why, or why not?

3. Do you think that your service location can help make a good impression on customers? Why, or why not? What things about the location would make a good impression? A bad impression?

Group Activity

Get a city map from your Chamber of Commerce or city planning department. Divide the city into several areas. Divide your class into small groups, one for each city area.

Each group should visit its area and decide if that is a good location for an energy specialist service. To help you decide, consider all these questions.

- Is the location near potential customers?
- Will the general area help the service "image"?
- Is there space for everything you need?
- Is the building in good condition?
- Could someone starting a service afford the rent? To help answer this question, find out typical office rents in the area.

After all groups have finished, take turns reporting to each other. Describe your group's location. Then tell what you decided and why.

UNIT 3

Getting Money to Start

Goal: To help you plan how to get money to start your energy specialist service.

Objective 1: Write a business description for your service.

Objective 2: Fill out a form showing how much money you need to borrow to start your service.

LOAN OFFICER

THE O'TOOLES APPLY FOR A LOAN

Sally and Mike add up everything they need to pay for to start their service. The total comes to $15,000. They have $10,000 in their savings account, so they need $5,000 more. They decide to apply for a bank loan.

They ask the bank's loan officer what the bank requires. She tells them, "The bank needs a business description about your plans. The description must tell exactly what your service will be and how you will run it.

"You must also prepare a statement of financial need. It must show your start-up costs, how much money you have now, and how much more you need."

Sally and Mike take home all the necessary bank forms. They're excited about starting their service. They want the bank to think it's a good idea. So they work very carefully on the information the bank needs. They want their information to be clear and complete.

Getting Money to Start

When the O'Tooles apply for a loan, the bank wants information about them and their business plans. If you apply for a loan, the bank will need information about you and your business plans. You can start now to keep a list of your education, work experience, and finances. That will help you provide the information about you.

For their business plans, the bank needs a business description and a statement of financial need. Read on to learn how the O'Tooles prepare these things.

Business Description

The O'Tooles' bank wants to know exactly what their service will be and how they will run it. Their business description must show that they have made complete plans. It must be organized and clear. Remember, they have to "sell" the bank on their idea!

The bank requires five kinds of information in the business description:

- Kind of business. Exactly what kind of business is it? What services will it offer? How will it be run?
- Location. Where will it be located, and why?
- Competition. What is the competition like?
- Customers. Who will the customers be?
- Plans for success. How do they plan to make their service "stand out"?

Read on to see how the O'Tooles' business description covers the five kinds of information.

Kind of business. The O'Tooles write, "We plan to start an energy specialist service. Its name will be Energy, Inc. Its overall goal will be to help people save energy and use it wisely. We will offer two main services: an energy audit, and a solar service. We will be partners in owning and running the service. We also plan to hire a qualified solar equipment installer."

Location. "We plan to locate the service at 122 Broadway. The location is near homes and other businesses. It is in an area where we can attract customers. We can rent an office and equipment storage space for $500 per month."

Competition. "It is hard to predict how much competition we will have. Right now we are the only building contractors in the area who specialize in energy conservation."

Customers. "We plan to attract customers among homeowners and business owners. Many people in the area want to conserve energy. Federal, state, and local tax credit programs encourage them to use solar energy-saving methods. Based on our experience as building contractors, we believe we will have no trouble attracting customers."

Plans for success. "People recognize the need for energy conservation. We will stress that we are energy specialists. We will point out our professional experience as licensed housing contractors. We also plan to show people that they are saving money by saving energy."

You can see that the O'Tooles' business description gives the information the bank requires. Read on to learn about their statement of financial need.

Statement of Financial Need

The O'Tooles' statement of financial need must show: (1) their start-up costs; (2) how much money they have now, and (3) how much more they need. This is how their completed statement looks:

STATEMENT OF FINANCIAL NEED

Starting Expenses		Money on Hand	
Salaries	$ 3,000	Cash on Hand	$10,000
Building and Property	1,000	Gifts or Personal Loans	
Equipment and Furniture	3,000	Investment by Others	
Supplies	5,000	TOTAL	$10,000
Advertising	2,000		
Other (licenses, insurance, professional services)	1,000		
TOTAL	$15,000		

TOTAL STARTING EXPENSES	$15,000
TOTAL MONEY ON HAND	$10,000
TOTAL LOAN MONEY NEEDED	$ 5,000

You can see that their starting expenses add up to $15,000. You know they have $10,000 in their savings account--that's "Cash on Hand." Nobody else is investing in the service now. So they need $5,000 in loan money from the bank. The $5,000 loan plus their $10,000 will give them the $15,000 they need to start.

If the bank wants, the O'Tooles can show exactly what each expense includes. They've really done their homework on how much it will cost to start their service.

Meeting with the Loan Officer

After the O'Tooles complete their business description and statement of financial need, they meet with the bank loan officer. They discuss their plans with her. At the end of the meeting she says, "All the paperwork you gave me about your plans was organized and clear. You did four other things that made me think you will run your service well. First, you listened to my advice when I made suggestions about your service. That makes me think you will also listen to accountants or lawyers

if you need their advice. Second, you were ready to answer questions about your service. You've thought about how to handle problems. That makes me think you will be able to think through and solve problems well. Third, you are willing to invest your own money. That tells me you have confidence in the success of your service. Fourth, you are willing to put a lot of your energy into your service. You know it takes a lot of time and hard work to start a business and keep it running. Congratulations, your loan is approved!"

The four things the loan officer describes can convince a bank you are a good business risk.

Summary

To apply for a business loan, you need to provide information about yourself and your business plans. You now know the kinds of information to include in your business description and statement of financial need. You also know some other things that help convince lenders that you are a good business risk.

Learning Activities

Individual Activities

1. Pretend that the statement of financial need shown below is for your service. Fill in the blanks. How much loan money do you need?
   $\$$ _____

STATEMENT OF FINANCIAL NEED

Starting Expenses		Money on Hand	
Salaries	$ 2,000	Cash on Hand	$ 5,000
Building and Property	1,200	Gifts or Personal Loans	1,000
Equipment and Furniture	4,000		
Supplies	4,000	Investment by Others	3,000
Advertising	1,600		
Other	1,000	TOTAL	$ _____
TOTAL	_____		

TOTAL STARTING EXPENSES	$ _____
TOTAL MONEY ON HAND	$ _____
TOTAL LOAN MONEY NEEDED	$ _____

2. Call two or more banks in your area. Ask what they require when people apply for a business loan. Describe how the banks are the same or different in what they require.

3. To get an idea of what your start-up costs might be for equipment and supplies, call two or more building contractors. Building contractors use equipment and supplies similar to what you will need. Ask what types of equipment and supplies they use, and what their start-up costs were.

4. Call two or more solar equipment companies. Ask what their start-up advertising costs were. Ask what types of advertising they used to start.

5. Write a business description about the kind of energy specialist service you might start. You may have to make up some information, such as the address. Try to make your business description organized and clear. Include information about these five things: (1) kind of business; (2) location; (3) competition; (4) customers; and (5) plans for success.

Discussion Questions

1. Do you think the O'Tooles' business description describes well what their service will be and how they will run it? Why or why not?

2. Can you think of any start-up costs they forgot to include in the statement of financial need? If so, what?

3. If you were the loan officer at their bank, would you give them a loan? Why or why not?

Group Activity

Invite one or more loan officers to visit your class. If possible, invite them from different places. For example, banks, credit unions, and the Small Business Administration all give loans. Ask what they require when people apply for a business loan. Do they all have the same requirements? If so, what are they? If they have different requirements, how and why are they different? Do they all require a business description and a statement of financial need? Ask questions about any requirements you don't understand.

UNIT 4

Being in Charge

Goal: To help you plan how to hire and train employees and divide the work of your energy specialist service.

Objective 1: Decide how to divide the work of your service among several employees.

Objective 2: Pick the best person for a specific job in your service.

Objective 3: Describe one kind of training you might give your employees.

SALLY AND MIKE DIVIDE THE WORK

Sally and Mike have thought a lot about how to divide the work of their service. Between them, they have all the skills to provide energy audits and solar services. But they also need time to work on finances. And they need to do all the other things it takes to run a business.

They decide they will share the overall management of the service. They will explain their services to customers, do energy audits, and advise customers on solar energy-saving methods. They will also prepare cost estimates for customers and supervise each job.

They decide to hire a qualified solar installer to do most of the work installing solar devices. To recruit applicants, they run this ad in the newspaper:

> "Wanted! Qualified solar installer for our new energy specialist service. You must have completed a solar apprenticeship or similar training. Responsibilities will include installation, troubleshooting, and maintenance. Advancement possibilities. References required."

Sally and Mike interview several applicants. One person they interview is Marcus Jones. Marcus completed the solar apprenticeship offered by the local sheetmetal union. He then worked for a solar equipment company for a year. He installed solar devices for customers. He liked the work, but he wants more responsibility. He's very enthusiastic about Sally and Mike's service. He has excellent references. Sally and Mike decide to hire him.

They decide to use a typing service at first. So they don't need a secretary. They will train Marcus to help them do energy audits. As the service grows, they may need to hire more energy auditors, solar installers, and a secretary.

Being in Charge

Being in charge means that you are the boss. You make the decisions about how to run your service. Some of your most important decisions will be about hiring. You will want to hire the best people you can for every job in your service. You will want to make sure they have the training required for those jobs. Read on to learn more about the kinds of decisions you will make when you hire and train your employees.

Hiring

Your first decisions are what jobs you need filled and how many people you need for each job. What jobs will depend on exactly what energy services you offer. How many people for each job will depend on the size of your service.

Next you must decide where to look for people to hire. The O'Tooles decide to run a newspaper ad. The ad tells exactly what kind of person they need. You can see that they get a lot of information into a brief ad. That's because they know exactly what they want in their staff. So the ad is clear and to the point.

Check the people's references before you hire them. From the "pool" of people you interview, you can hire full-time or part-time staff, depending on your needs.

Matching People and Tasks

You will want to be sure that all employees know what their jobs are. Give each employee a written job description that exactly describes that

person's tasks. Here are brief descriptions of staff you might need in your energy specialist service.

Energy specialist. Like Sally and Mike, these people should be specialists in energy conservation. They should know a lot about energy systems in buildings and other structures that use energy, such as swimming pools. They should understand solar heating and cooling systems. They should also know how to use solar technology with other types of heating and cooling methods. They need to prepare cost estimates and explain how saving energy saves money. They should also know building codes, solar tax credit programs, and other energy regulations.

Energy auditor. These people should be skilled in examining homes and other structures to tell customers how to save energy. For example, they will check the furnace, water heater, insulation, and windows to see if customers are wasting energy. They will advise customers on ways to conserve energy.

Solar installer. These people must know solar hardware and plumbing. They must also know how to connect solar systems with standard backup heating and cooling units. They should also be able to troubleshoot problems and provide routine maintenance.

You and your staff really need to have a wide variety of skills. You need technical skills in sheetmetal, plumbing, carpentry, electrical, heating and air conditioning, and related construction trades. As the owner, you also need business management skills to keep the service running.

When Sally and Mike hire Marcus, they are planning for the future as well as the present. Marcus has skills they need. He also wants advancement possibilities. The O'Tooles see him as a future supervisor of other installers and auditors if their service grows. They plan to try very hard to match their employees with tasks they like and do well.

Training

The training you will want for your staff will depend on the specific energy services you offer. Many construction trades provide training related to services you may offer. Solar apprenticeships are offered by a variety of unions and other organizations.

You will want your staff to have as much training as possible before you hire them. You will still probably want to give them certain kinds of on-the-job training.

For example, you will want your energy auditors to follow your service's procedures as they conduct energy audits. You will also want to be sure your solar installers know all the local building codes that apply to solar technology. You may want to train some of your employees to prepare cost estimates of jobs for customers. You will want to keep your staff up-to-date on the latest developments in energy conservation and technology.

Ask your staff for suggestions of areas in which they would like training. Talk with customers about the quality of work done by your staff. If the quality needs improvement, help your staff get any additional training they need. Your goal is to hire and keep well-trained staff.

Summary

Hiring the best people you can is a key part of running your service well. You need to know exactly what jobs you need done and what kinds of people you need to do them. The people you hire need to know exactly what is expected of them. You may want to give your staff on-the-job training to help them keep their skills up-to-date.

Learning Activities

Individual Activities

1. Write a paragraph about the employees you need for your service. Include these things in the paragraph: (1) the number of employees you need; (2) what their duties will be; and (3) what background and personal qualities you want them to have.

2. Write an ad to recruit people as energy auditors for your service. Write the ad so that it tells exactly what background and personal qualities they need.

3. Write an ad to recruit people as solar installers for your service. Write the ad so that it tells exactly what background and personal qualities they need.

4. Call one or more solar equipment companies. Ask if they employ solar installers. If so, ask what their duties are. Ask what training they need. If you call more than one company, compare their answers to see if their employees' duties and training are the same or different.

5. Call one or more utility companies that do energy audits. Ask what their energy auditors' duties and training are. If you call more than one company, compare their answers to see if their auditors' duties and training are the same or different.

6. Find out if the construction trade unions in your area have solar apprenticeship programs. If they do, find out the entrance requirements and the program contents and length.

Discussion Questions

1. Do you think the O'Tooles' ad does a good job of describing the employee they need? Why, or why not?

2. Do you think they made a good decision to hire Marcus? Why, or why not?

3. What kinds of training will you probably want your employees to have?

Group Activity

In pairs, take turns role playing a hiring interview. One of you is the owner of an energy specialist service. The other is someone applying for a job as a solar installer with that service. The purpose of this activity is for you to practice being an owner. When you run your own service, you will interview people before you hire them. This gives you a chance to practice an interview.

When you play the "owner," decide what background and personal qualities you want your installers to have. You must do two main things in the interview: ask questions to find out if the "applicant" qualifies for the job; and tell the "applicant" what the installer's duties will be.

When you play the "applicant," decide on your background and personal qualities. Then "be" that person during the interview. When the "owner" describes your duties, ask questions about anything you don't understand.

Before you begin the role plays, the whole class can list these things on the board: (1) questions the "owner" can ask to find out if the "applicant" qualifies for the job; (2) installer duties the "owner" can describe to the "applicant"; and (3) kinds of background and personal qualities "applicants" can have. These lists can help you in your role plays.

At the end of each interview, the "owner" should decide whether to hire the "applicant." Talk about the reasons for your decision.

UNIT 5

Organizing the Work

Goal: To help you organize the work of your energy specialist service.

Objective 1: On a work order form, list what needs to be done for one of your customers.

Objective 2: Write a work schedule for yourself or an employee.

WHAT A DAY!

Energy, Inc. has now been in business for a month. Sally and Mike have been very busy. They often find themselves saying, "What a day! It's a good thing we're organized, because there's a lot of work to keep track of."

Tonight they're discussing one of the phone calls they got today. Mike says, "You were out doing an energy audit when Mrs. Howard called. She wants to put a swimming pool in her back yard with a solar heating system. She asked me how much it would cost, and how the system works. I told her that you or I could visit her tomorrow, talk about her plans, and prepare a cost estimate."

"That's fine," says Sally. "I can do it at 11 a.m., because I'll be in her neighborhood. I'll also explain to the Tarwells how a solar domestic water heater will save them energy and money. We don't have any energy audits scheduled for tomorrow. Marcus knows he's scheduled for two solar installation jobs. How about if I do customer visits in the morning while you answer the phone and do paperwork here? Then we can switch for the afternoon."

"Great!" Mike answers. "I'll call Mrs. Howard first thing in the morning and tell her to expect you at 11."

Organizing the Work

When you run your service, there will probably be many times when you say, "What a day!" You will work with many different customers. Each one will have his or her own particular energy conservation needs. So each job you do will be different.

To help your service run smoothly, organize the work. To organize the work well, you must keep track of the work and schedule the work.

Keeping Track of the Work

Keep track of the work to be done. This will help you schedule your staff assignments. It will also help you respond to customer work orders promptly.

Most of your customer work requests will probably be made over the phone. So you will need some way to keep track of requests as they are made. You should keep records of at least the following information:

- customer name, address, and phone number;
- date and time they call;
- what they want done; and
- what you do about their request.

An easy way to keep track of customer requests is to keep a file on each customer. In the file, you can keep a list of what service you provide the customer. You can add notes about aspects of the work you want to remember.

Every time the customer calls, add the new request to the file. You can check the file to see what services you have given the customer

before. If customers have questions about what you've done for them, you can quickly look in their file to find out.

To keep track of the work to be done for each customer, the O'Tooles use this form:

WORK ORDER

FROM: Energy, Inc.

DATE: _____

WORK ORDER NUMBER: _____

ORDER TAKEN BY: _____

JOB FOR: _____

START WORK ON: _____

TERMS OF PAYMENT: _____

Person Doing Work	Description of Work	Materials	Labor	Total Cost
WORK STARTED: _____		TOTAL MATERIALS		
WORK FINISHED: _____		TOTAL LABOR		
		TAX		
		TOTAL COST		

Some of their work, such as installing solar water heaters, involves separate costs for materials and labor. For other work, such as energy audits, they charge a flat rate. So for energy audits, they simply use the Total Cost column on the work order. The forms you decide to use will depend on what services you offer.

The O'Tooles make three copies of each work order. Copies go to the customer, the staff member doing the work, and the O'Tooles' customer file.

Scheduling the Work

The O'Tooles are organized. They schedule each day's work orders ahead of time. That way, all staff members know what their responsibilities are each day. The form they use for each day's schedule looks like this:

DAILY WORK SCHEDULE Date: _____		
CUSTOMER NAME AND ADDRESS	WORK TO BE DONE	START TIME

They use as many pages as necessary for each day. The form is simple and gives the basic information they need for scheduling:

- customers' names and addresses;
- work to be done for each customer; and
- time to start work for each customer.

All staff members get copies of the schedules so they can plan their work.

The daily schedules help in other ways besides planning each day's work ahead of time.

- When unplanned things happen that throw the schedule off, the O'Tooles can quickly decide what changes to make and see which customers to call about those changes.
- If they need to contact any staff quickly, they can check the schedule to see where they are at that time.
- If staff members have problems with the schedule, they can point out exactly which work they think won't get done. The schedule can be changed if necessary.

Scheduling the owner's work is not easy! You need to be "on top" of everything that your service does. You will spend time doing all of these things.

- Hiring staff
- Training staff
- Organizing the work
- Supervising staff
- Keeping records of work
- Keeping financial records
- Talking with clients
- Handling staff problems
- Meeting with other people you deal with (accountant, building inspector, insurance agent, and others)
- Dealing with emergencies
- Solving routine problems
- Planning for the future

With all these things to do, you can see why it is important to be organized.

Summary

You now know some of the things the O'Tooles do to keep track of the work and schedule the work. Keep these things in mind when you organize the work of your service.

Learning Activities

Individual Activities

1. Call one or more solar equipment companies that install and service solar devices. Ask how they keep track of the requests they get from customers. If you call more than one service, do they keep track the same way? If not, what's different?

2. Call a utility company that does energy audits. Ask how it schedules the audits. Find out what the audits include and how long they take.

3. Call one or more solar equipment companies that install and service solar devices. Ask if they make daily schedules for the work they do for customers. If so, ask them to tell you what the schedules are like. If you call more than one service, do they schedule their work the same way? If not, what's different?

4. Design a form you could use to keep track of phone requests you get from customers. You can use 5" x 7" file cards or any other form that would work for you. Remember to include the basic information you need about customer requests.

5. Pretend that you are deciding how to organize the work of your energy specialist service. Design a work order form to keep track of the work to be done for each customer. If you like, show it to the class and explain how it will work.

Discussion Questions

1. Do you think it's important to keep track of customer requests your service gets over the telephone? Why, or why not? If you think it's important, what kinds of information should you keep track of for each request?

2. Do you think the O'Tooles' work order form will help them organize the work of their service? Why, or why not? Would you change it? If so, how and why?

3. Do you think you will be busy as the owner of an energy specialist service? Why, or why not? What are some of the things you will do? Will you like doing those things? Why, or why not?

Group Activity

Look at the list of things you might do as the owner of an energy specialist service. The list is in your text, right before the Summary for this unit. Can you think of other things the owner might have to do? Add them to the list.

On the chalkboard, make two columns with these headings:

Every Day	Not Every Day

For each thing on your list, decide whether you would have to do it every day when you run your service. Write it in the column where you decide it belongs.

Try to decide how much time you think you would spend doing each thing. For each thing in the "Every Day" column, write down how many hours you would spend on it every day. For each thing in the "Not Every Day" column, write down how many hours you would spend on it each week.

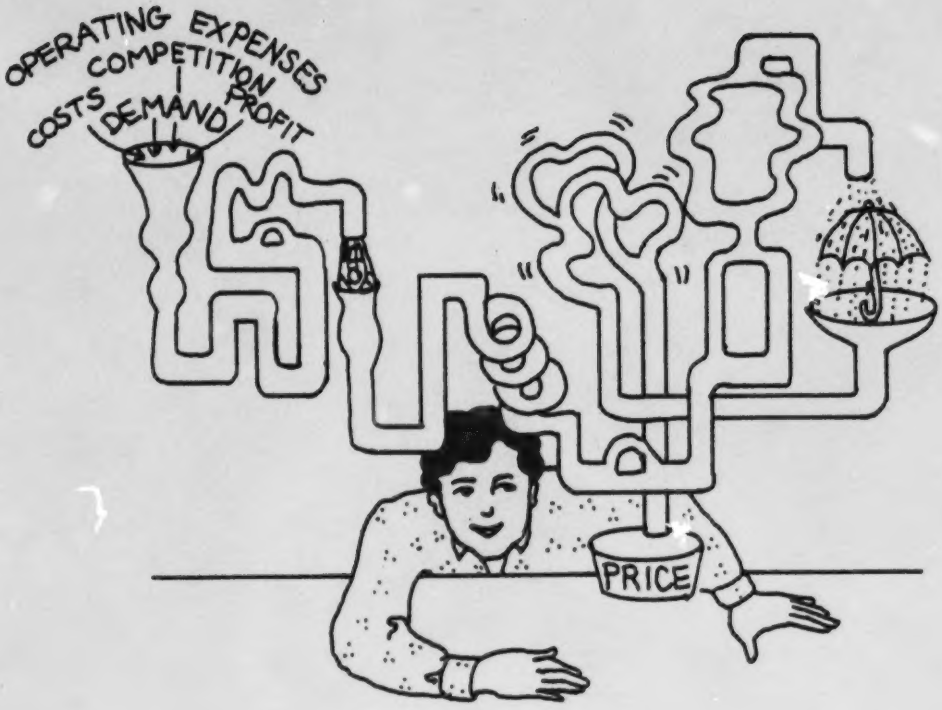
Does it look as if you will work many hours running your energy specialist service?

UNIT 6

Setting Prices

Goal: To help you decide how to set prices for your energy specialist services.

Objective 1: Pick the best price for one of your services.


OPERATING EXPENSES
COMPETITION
COSTS
DEMAND
PROFIT
PRICE

SALLY AND MIKE SET PRICES

Marcus is eager to learn about how Sally and Mike run their service. He asks how they set their prices.

Sally explains, "We already had experience setting prices for our building contractor service. For our energy specialist service, we figured that no two jobs would be exactly alike. Each customer would have different energy conservation needs. So we knew it would be important to prepare careful cost estimates for each job."

"That's right," adds Mike. "We decided to set flat rates for the energy audits. The rate depends on the size of the building. For the solar service, we give the customer an estimate of labor and material costs before we start work. We agree not to charge more than our estimate. So you can see how important it is to estimate carefully!"

Sally continues, "Right now we're the only energy specialist service in the area. So we don't have competition we can compare our prices to. But it's likely that more contractors will offer energy specialist services soon. Then we will have competition. We based our prices on the average labor and materials costs in the construction trades. We did that because our service draws on many trade skills."

Marcus says he can see there's a lot to think about when you set prices.

Setting Prices

How will you decide how much to charge for your services? Here are five things to think about when you set prices.

- What are your costs for materials?
- How much demand is there for your services?
- How much competition do you have?
- What are your expenses to keep the service running?
- How much profit do you want to make?

Read on to learn more.

Costs for Materials

In your energy specialist service, you will be charging your customers for the materials you use in your solar installations. These will include solar panels, piping, valves, insulation, and all other materials. Like Marcus, you will generally charge your customers a separate amount for materials. Your labor charge will include all your other expenses.

Demand for Services

Your customers will pay more for services they want than for those they don't want. They will also pay more for a service they want if it's the only one around. So you need to find out how popular your services are.

The O'Tooles see a high demand for an energy specialist service. People realize how important it is to save energy and use it wisely. You

can help create demand for your services through advertising. Point out to potential customers that they will save money by saving energy.

Competition

Right now the O'Tooles offer the only energy service in the area. They will attract customers partly because their service is the first of its kind. So at first they don't have to worry about competitors charging lower prices.

But probably they will soon have competition in their location. Then they will have to see how much the competition charges. If the O'Tooles' prices are a lot higher, they may lose customers.

You will need to know what your competition charges. If you can offer lower prices, your customers will be happy. If you can't offer lower prices, you must convince customers that your service is better. Then they won't mind paying you more.

Operating Expenses

"Operating expenses" are your expenses to keep the service running. Expenses to run your service will include:

- rent and utilities (phone, electricity, water, heat);
- salaries;
- advertising;
- insurance;
- office supplies;
- equipment maintenance; and
- "professional services" (accountant, lawyer, insurance agent).

Keep in mind that you will need a wide range of insurance to protect the public, property owners, and you.

Your expenses for salaries will depend on how many employees you have. To attract and keep good staff, you may want to pay higher than average salaries.

The construction trades recommend hiring union members for high quality work. Salary and benefit costs will be higher for union than for non-union workers.

You will need to figure out how high your operating expenses will be. Your operating expenses may be very high. Then you may decide to charge more for your services. Or you may figure out how to cut your operating expenses.

Profit

How much money do you want your service to make in a month or a year? That amount is your "profit goal." It should be at least enough to cover your expenses and pay salaries.

Many small business owners give themselves only a small salary at first. They want to be sure they have enough money to keep the business running and to pay their staff.

How high you set your prices will depend partly on how much profit you want to make. The O'Tooles' profit goal for their first year is to make enough money to cover their operating expenses. They know it's unrealistic to set their profit goal too high.

For energy audits they charge a flat rate, depending on the size of the building. The charge is for the energy auditor's time to do the audit.

For their solar service they estimate the labor and materials costs before they start work. The total cost depends on exactly what the customer wants done.

If you provide services that require separate labor and materials costs, make sure you know how to estimate carefully. The construction trade unions have manuals on how to prepare cost estimates. Try to get experience at doing cost estimates.

Summary

You now know things to think about when you set your prices. These things include costs of materials, demand, competition, operating expenses, and profit.

Learning Activities

Individual Activities

1. Call two or more solar equipment companies that install solar devices. Ask what they charge for their services. Compare their prices. Are they the same? Ask what things they consider when they set their prices.

2. Call a construction union or building contractor association in your area. Ask if it has manuals on how to prepare cost estimates for work to be done. List the main topics the manuals cover.

3. Al Cohen plans to start an energy specialist service. There's a lot of competition in his area. Do you think he should charge more, less, or about the same as the competition? Why?

4. Pretend that after three years the O'Tooles decide to hire two more employees. They also decide to buy an infrared scanner for heat loss detection. Their operating expenses have gone up a lot in three years. They're trying to decide if they should charge extra for customers who want the infrared scanner service. Do you think they should? Why, or why not?

5. Pretend you are just starting your energy specialist service. If you charge the same as your competition, you will make a big profit. If you charge slightly less than your competition, you will still make a profit, but not as much. Will you charge the same or less than your competition? Why?

Discussion Questions

1. Do you agree with the O'Tooles' decision to base their prices on the average labor and materials costs in the construction trades? Why, or why not?

2. Pretend the O'Tooles have a lot of competition in their area. They know their competitors' prices. They could set their prices higher, lower, or about the same as the competition. What do you think they'll decide, and why?

3. What do you think will be the O'Tooles' highest operating expenses? Why? What do you think will be their lowest operating expenses? Why?

Group Activity

Divide into two or more groups. Each group should write down this list of things to think about when you set prices:

- cost of materials;
- demand for services;
- competition;
- operating expenses; and
- profit.

Read the case study on the next page. Which of the five things do you think will be most important to Paul when he sets prices? Which will be least important? When all groups have finished, report to each other what you decide. Did all the groups choose the same things? If not, talk about why you decided what you did.

Sunpower, Inc.

Paul's service, Sunpower, Inc., specializes in energy-saving solar methods. It's located in an area that gets a lot of sun. There's a high demand for solar services, but there's also a lot of competition. Paul plans to give excellent guarantees with all his work. He has top quality staff, and he will pay them well. He plans to advertise heavily during the first year. He's a little worried about rising materials costs. He plans to cover all his operating expenses before he takes a salary for himself the first year.

UNIT 7

Advertising and Selling

Goal: To help you learn ways to sell and advertise your energy specialist services.

Objective 1: Pick one way to advertise your service.

Objective 2: Design a printed ad for your service.

THE O'TOOLES ADVERTISE

The O'Tooles plan how to advertise their service. They discuss all the possible ways to advertise. One of the ways they choose is a printed ad. They can put the ad in newspapers and the Yellow Pages. They can also mail the ad to potential customers. Together they design this ad:

ENERGY, INC.

Save money by saving energy! Make the best use of energy available to you. We can help. We offer:

- energy audits;
- solar services; and
- excellent guarantees.

We are licensed professionals. Call today to find out how <u>you</u> can save!

Energy, Inc.
122 Broadway
958-7347

Advertising and Selling

You will need to plan how to attract customers to your energy specialist service. How can you advertise and sell your services? Read on to get some ideas.

Plan Your Advertising

There are several important questions to ask when planning your advertising.

- Who is your audience? The O'Tooles' potential customers are homeowners and business owners who want to save energy and money.
- Why are you advertising? The O'Tooles are advertising to attract customers to their new services. As they expand or change their service, they may change their advertising.
- How will you advertise? One method the O'Tooles use is a printed ad. They can use it in several ways. They also plan promotional events. They know there are many ways to advertise.
- What will your ad say? The O'Tooles' ad lists their services. It tells people they can save money by saving energy. It gives their address and phone number so customers can contact them.
- When will you advertise? Like the O'Tooles, you will definitely want to advertise when you start your service. If you put an ad in the Yellow Pages, people can find it at any time. If and when you expand your services, you will probably want to advertise.
- How much will your advertising cost? Some ways to advertise are more expensive than others. Find out the costs for the ways you plan. For example, the O'Tooles will show their ad to several local printers. The printers can estimate costs for fliers and brochures. Then the O'Tooles can decide which printer to choose.

Ways to Advertise

There are many ways to advertise your service. Here are some ideas:

- newspaper ads;
- the Yellow Pages;
- radio ads;
- television ads;
- brochures you mail to potential customers;
- fliers you put on cars or doorknobs--you could also give fliers or brochures to:
  - real estate agents;
  - architects;
  - utility companies;
  - construction trade associations;
  - other individuals or groups whose clients or members could use your services;
- emblems on your trucks and equipment so people notice them--the emblems should include your service's name; and
- uniforms for your staff that look professional and have your service name on them.

"People" Ads

You and your staff can do a lot personally to advertise your service. Here are examples.

- You could hire a salesperson to phone and visit potential customers. Or you could take on that role. Whoever does it must know a lot about your service. He or she must be prepared to answer questions.
- Your staff can talk with people about your service as they do the work. That's one reason why it's important to hire friendly, competent, well-qualified staff. You could pay them a bonus for each new work order they get.
- Plan events to advertise your service. For example: offer tours of energy-conservation projects your service completed. These

could include homes, swimming pools, offices, or community facilities. Give demonstrations of energy audits, solar devices, or other services you provide.

- Sponsor an energy-conservation award for customers who use your service to save energy. Publicize this award in the newspaper.
- Contact newspapers about your service and events. Publicize your tours and demonstrations in newspaper stories and pictures.
- Take part in energy-conservation groups and activities, such as energy task forces and public information programs on energy conservation.

One of the best ways of advertising and selling is to do excellent work. If customers are happy with your work, they will tell their friends about your service.

How to Design Printed Ads

Printed ads will probably be a big part of your advertising. These include newspaper ads, Yellow Pages ads, brochures, and fliers. Printed ads should have these five parts: headline, illustration, copy, layout, and identification.

Headline. The headline of the O'Tooles' ad is the name of their service--Energy, Inc. Your headline should attract attention. It should make people want to read the rest of the ad.

Illustration. The O'Tooles' illustration is the Energy, Inc. sun emblem. They will also put this emblem on their trucks, equipment, and uniforms. Your illustration should help people remember your service.

Copy. This is what you write about your service. Your copy should:

- appeal to customers' needs. For example, the O'Tooles' ad points out that you save money by saving energy.
- describe your services. The O'Tooles' ad lists the services they offer. They also say they are licensed professionals.

- call for customer action. The O'Tooles' ad tells customers to "call today" to find out how to save.

Layout. This is the way you organize your ad on the page. The O'Tooles' ad is simple and easy to read. The layout should make your ad attractive.

Identification. Give the name, address, and phone number of your service. That way customers can contact you. The O'Tooles' identification is at the bottom of their ad.

A good printed ad gives important information about your service. It should be simple and truthful. Use your imagination to make your ads attractive.

Summary

You now know many ways to advertise and sell your energy specialist service. You must decide which ways will be best for you to use. You also know about the five parts to include in printed ads for your service.

Learning Activities

Individual Activities

1. Look up two or more solar equipment companies in the Yellow Pages. Call them and ask what ways they advertise, besides the Yellow Pages. Ask why they picked these ways.

2. Pick two or more ways to advertise. For example, you might pick the Yellow Pages, newspaper ads, radio, and fliers. Find out the costs for each. If you can, figure out how much it would cost you per month to advertise your service each way.

3. Look at two or more solar equipment company ads in the Yellow Pages or newspaper. Do they each have a headline, illustration, copy, layout, and identification? Which ads do you think are best, and why? Can you think of ways to make them better? If so, how?

4. Pretend that after two years your service is going well. You decide to buy an infrared scanner for heat loss detection. You want to advertise this addition to your service. How will you let customers know about it? Write a paragraph about the ways you will advertise, and why you picked these ways.

5. Design a printed ad for your service. Include a headline, illustration, copy, layout, and identification. Use your imagination!

Discussion Questions

1. Do you think the O'Tooles' ad will attract customers? Why, or why not?

2. What other ways of advertising do you think they will decide to use, and why?

3. Pretend you are running your energy specialist service now. Think about all the ways of advertising. Which ways do you think would take the most time for you to do? Which ways would take the most money? Which ways would reach the most customers? Which ways would you decide to use, and why?

Group Activity

Bring to class as many different printed ads as you can find for solar equipment companies, other energy services, or building contractors. Divide into small groups so that each group has at least one ad.

Each group will decide if its ad has these five parts: headline, illustration, copy, layout, and identification. If parts are missing, what are they? Can your group think of ways to improve its ad?

When all groups have finished, take turns showing your ads to each other. Each group will point out its ad's parts. The group will talk about any ways to improve the ad. The other groups can make suggestions, too.

When all groups have reported, decide which ads you think are the best, and why.

UNIT 8

Keeping Financial Records

Goal: To help you learn how to keep financial records for your energy specialist service.

Objective 1: Fill out a customer billing form for services you do for a customer.

Objective 2: Fill out a daily cash sheet for money you receive and pay out in one day.

CASH FLOW

The O'Tooles share the responsibility of keeping track of finances. Someday they may hire a bookkeeper for that job. But they decided to do it themselves while their service is getting started.

They record customer orders and payments every day, and pay their bills. At the end of the day, they examine the daily cash sheet for problems. If they spot problems, they discuss how to solve them.

The O'Tooles pay Marcus twice a month. They list customer services after each job and send a complete bill once a month. They keep copies of the bills and payments in case customers have questions.

Today is Mike's turn to do the daily cash sheet. He tells Sally, "These are the customer payments we got today:

Mr. Ortega	$250
Ms. Shaun	$95
Mr. Harold	$400
Mrs. Casey	$500

That's a total of $1,245. We paid these bills:

Rent	$500
Printer (advertising)	$200
Equipment parts	$150

That's a total of $850."

Keeping Financial Records

When you run your energy specialist service, you will need to keep track of finances. That includes income and expenses. Financial records help you to:

- see how your service is doing;
- make business decisions; and
- fill out income tax forms and other government reports.

An accountant can give you advice about your financial records. You may want to hire a bookkeeper or train a staff member to help you keep records.

What records will you need? You will need a way to bill customers for your services. You will also need to keep track of money you receive and pay out each day. Read on to learn more.

Customer Billing Form

Decide how often to bill your customers. The O'Tooles prepare a record, or invoice, for each job as soon as it is done. Then they mail a complete bill to customers once a month. This is the customer billing form they use:

ENERGY, INC.
CUSTOMER BILLING FORM

Customer: Mr. Todd

Payment Due Date: 7/15

Date	Dates of Service	Amount Charged	Payment Received	Balance
6/15	6/12	$50	$50	------
6/30	6/18-6/20	$200	---	$200

You can see on the form that on June 15, the O'Tooles charged Mr. Todd $50 for services on June 12. Mr. Todd paid that. On June 30, he was billed $200 for services during June 18-20. He hasn't paid that yet, so he owes a balance of $200.

The O'Tooles attach the following form to show Mr. Todd exactly what services they provided:

SERVICES PROVIDED		
Date	Services	Amount Charged
6/12 6/18-20	Energy audit Solar water heater installation	$ 50 $200

The form shows the dates and amounts charged for each service.

The O'Tooles' forms can give you ideas for what you will decide to use in your own service. The exact forms you decide to use will depend on what your service is like.

Daily Cash Sheet

The O'Tooles use the daily cash sheet shown on the next page to keep track of the money they receive and pay out each day. Your daily cash sheet will depend on what you decide will work best for your service.

DAILY CASH SHEET June 28	
Cash Receipts	**Cash Payments**
Customer Payments $ 500.00	Salaries $ _____ Building Expenses 500.00 Equipment and Furniture _____ Inventory or Supplies 250.00 Advertising 100.00 Other _____
TOTAL CASH RECEIPTS $ 500.00	TOTAL CASH PAYMENTS $ 850.00

You can see that on June 28, the O'Tooles received $500 in customer payments. They also paid out a total of $850.

The O'Tooles summarize their daily cash sheets at the end of each month. At the end of the year, they summarize the monthly reports. This gives them a yearly report on their overall profit and loss. You will learn more about this in the next unit.

Summary

You have seen a sample customer billing form and a daily cash sheet. Forms like these can help you keep the financial records you need for your service. The exact forms you decide to use will depend on what your service is like.

Learning Activities

Individual Activities

1. Fill out the O'Tooles' daily cash sheet for the day described in this unit's case study.

DAILY CASH SHEET	
Cash Receipts	**Cash Payments**
Customer Payments $_____	Salaries $_____
	Building Expenses _____
	Equipment and Furniture _____
	Inventory or Supplies _____
	Advertising _____
	Other _____
TOTAL CASH RECEIPTS $_____	TOTAL CASH PAYMENTS $_____

2. On July 8, the O'Tooles charged Mr. Winn $50 for an energy audit they did that day. On July 31, they charged him $200 for services during July 22-25. Mr. Winn hasn't made any payments yet. Fill out the customer billing form on the next page for Mr. Winn's account. Payment is due August 15.

ENERGY, INC.

CUSTOMER BILLING FORM

Customer: _____

Date	Date of Service	Amount Charged	Payment Received	Balance Due

3. Call two or more solar equipment companies or building contractors who install solar devices. Ask how often they bill customers, and what kind of billing forms they use. If possible, get copies of their forms. Compare the forms to each other and to the O'Tooles'.

4. Call two or more companies or contractors as in Activity 3. Ask if they keep daily cash sheets of money received and paid out. Ask what the forms are like, and get copies if possible. Compare them to each other and to the O'Tooles'.

5. Design a customer billing form or a daily cash sheet for your own service. Fill in some sample information to show how it will work.

Discussion Questions

1. Why do you think the O'Tooles decide they will be the ones to keep all the financial records while the service is getting started? Do you think this is a good decision? Why, or why not?

2. Do you think their forms will help them do a good job keeping track of finances? Why, or why not? Can you think of ways to improve their forms?

3. What other kinds of financial records does the owner of an energy service probably keep, and why?

Group Activity

Divide into small groups. Each group should decide the type of energy specialist service it will run. Decide exactly what energy services you will offer. Then decide how much you will charge for each service.

Now design a customer billing form and a daily cash sheet for your service. Fill in some sample information to show how you use the forms.

When all groups have finished, take turns showing your forms to the other groups. Say why you designed them the way you did. Show how to use them.

UNIT 9

Keeping Your Business Successful

Goal: To help you learn how to stay successful.

Objective 1: Figure out the net profit (before taxes), profit ratio, and expense ratio for an energy specialist service.

Objective 2: State one way to increase profits.

Objective 3: State one way to change your service to increase sales.

LOOKING AHEAD

After two years, Energy, Inc. has attracted many customers. People are pleased with the service's work. The public's concern about energy conservation continues to grow.

The O'Tooles hired another employee the second year. So their salary and insurance expenses increased. Rent and supply costs also increased.

Sally and Mike would like to buy an infrared scanner for heat loss detection in their energy audits. They think they may need a bank loan to pay for it. They don't seem to have much money from profits to pay for new equipment.

"Let's compare our financial records for the last two years," says Sally. "Then we can see exactly where our profits stand."

The O'Tooles' income, costs, and expenses were as follows:

Income	Year 1	Year 2
Customer Payments	$140,000	$170,000
Cost of Goods Sold	70,000	79,900
Gross Profit	$ 70,000	$ 90,100
Expenses		
Salaries	$15,000	$27,500
Building Expenses	6,500	8,000
Supplies	5,000	8,100
Advertising	2,500	4,000
Other (insurance, repairs and depreciation, etc.)	14,400	17,000
TOTAL	$43,400	$64,600

The O'Tooles decide the service does have a problem. Customer payments have increased, but expenses have increased even more. Their profit has decreased. They decide to try to increase their profit.

Keeping Your Business Successful

Every small businessperson wants to be successful. How can you keep your service successful? Here are three important ways:

- make sure you have enough cash;
- keep your profits up and costs down; and
- make changes in your service when necessary.

In the last unit you learned how to keep track of your finances. That will help you make sure you have enough cash. In this unit you will learn how to:

- keep track of your profits and increase them; and
- change your service to increase sales.

Keep Track of Profits

To keep track of profits, you must keep records of your income and expenses each year.

Profit/loss statement. The O'Tooles summarize their yearly income and expenses on a profit/loss statement as shown on the next page.

TWO-YEAR PROFIT/LOSS STATEMENT

	Year 1		Year 2	
	$	%	$	%
Income				
Customer Payments		100%		100%
Cost of Goods Sold				
Gross Profit				
Expenses				
Salaries				
Building Expenses				
Supplies				
Advertising				
Other (insurance, repairs and depreciation, etc.)				
TOTAL				
Net Profit (before taxes)				

To find their net profit, the O'Tooles subtract total expenses from total income. You can see that the profit/loss statement shows 100% next to total income. The blank space in the percentage column next to total expenses is for the expense ratio. The blank space in the percentage column next to net profit is for the profit ratio. These ratios can help you compare your expenses and profits from year to year.

Pretend these are the totals for your service one year:

Total Income = $100,000
Cost of Goods Sold = $50,000
Total Expenses = $30,000
Net Profit = $20,000

This is how you would compute your expense and profit ratios:

$$\text{Expense ratio} = \frac{\text{Expenses}}{\text{Income}} = \frac{\$\ 30,000}{\$100,000} = 30\%$$

$$\text{Profit ratio} = \frac{\text{Net Profit}}{\text{Income}} = \frac{\$\ 20,000}{\$100,000} = 20\%$$

You can compare these ratios to the ratios for other years. A year when your profits and profit ratio are higher is a better year.

Improving profits. If you think your profits are too low, you will try to increase them. Three ways to increase profits are to increase sales, raise prices, and reduce expenses.

Raising prices is simple. But you must be sure you won't lose customers because of it.

Reducing expenses is not always easy. You need to look carefully at all your expenses and decide where you can save.

To increase sales, you probably will need to change your service in some way. Read on to learn more.

Change Your Business to Increase Sales

If you want to increase sales to raise profits, you can:

- improve the quality of your service; or
- change the services you offer.

You may decide to do one or both of these things. First, you must figure out what will help increase sales. Talk to your customers and staff. Look at any changes in your community and competition. Study new business trends.

When the O'Tooles see their profits are down, they discuss what to do. Customers are pleased with the quality of their service, so they don't need to change that. They may change the services they offer, by adding an infrared scanner, for example. Customers say they would be willing to pay extra for the scanner service. The O'Tooles hope the scanner will attract more customers and increase their profit.

Summary

A profit/loss statement keeps track of your yearly income, expenses, and net profit. Compare the statements from year to year to see how your service is doing. The expense and profit ratios can help you compare years.

To increase profits, you must increase sales, raise prices, or reduce expenses. To increase sales, improve your quality or change your services.

Learning Activities

Individual Activities

Use the O'Tooles' case study to do the following. Write your answers on the two-year profit/loss statement in the text or next to the items below.

1. Fill in figures for both years.

2. Compute net profit for both years.

3. Compute expense ratios for both years.

4. Compute profit ratios for both years.

5. Which year was a better one?

Discussion Questions

1. The O'Tooles' service made money both years. So why are they worried about their profits? If you were they, would you be worried? Why, or why not?

2. What do you think they will do to try to increase their profits? Why? Do you think their profits will increase? Why, or why not?

3. Discuss all the reasons you can think of why sales of an energy specialist service might decline.

Group Activity

Here are new facts about the O'Tooles' service in its third year. Read them and plan how they can increase their profits. If you do this in small groups, take turns reporting your plans when they're done.

1. Several customers have asked for advice on making their cars more energy-efficient.

2. The O'Tooles know there is a need for an energy specialist service in a town 50 miles away.

3. Two new energy specialist services have opened up in the O'Tooles' area.

SUMMARY

You have seen that it will take careful planning to get your energy specialist service off to a good start. You know key things to consider as you plan your service. Things to consider include:

- services you will offer;
- customers;
- competition;
- your personal qualities;
- legal requirements for running your service; and
- location.

You also know that a business description and a statement of financial need must be provided when you apply for a loan.

Hiring and training the best employees you can find is very important. You must also organize the work and keep track of what needs to be done.

You know some things to think about when you set your prices. You also know ways to advertise your services.

Keeping careful financial records is part of running your service well. You know how to compare your profit/loss statements from one year to the next. You also know ways you can help keep your service successful.

To own and operate a successful energy specialist service you need training in energy conservation and work experience. You also need the special business management skills we have covered in this module. If you have not had such training, you should get it before deciding to own an energy specialist service. You can learn

business management skills through business classes or experience. Or you can learn by using the advice and example of an expert.

You may not make a lot of money by owning an energy specialist service. However, you would have the personal satisfaction of being responsible for your business and making your own decisions. Think about how important these things are to you in considering whether you should start your own energy specialist service.

QUIZ

1. What is one service an energy specialist might provide?

_____

2. Which personal qualities should an energy specialist have?

_____ a. Desire to be rich, and a little knowledge about solar energy

_____ b. Concern for the environment, and skills in construction and solar methods

3. What are two ways to help your service "stand out" from its competition?

a. _____

b. _____

4. What are two legal requirements an energy specialist service probably must meet?

a. _____

b. _____

5. List three things to consider when you're picking a location for your service.

a. _____

b. _____

c. _____

6. Which location would be best for your service?

_____ a. Central location near homes and businesses

_____ b. Run-down area with cheap rent on the edge of town

_____ c. New area with high rent on the edge of town

7. List three things to include in a business description when you apply for a loan.

a. _____

b. _____

c. _____

8. Pretend your total starting expenses are $18,000. You have $8,000 of your own, and a friend lends you $5,000. How much do you need to borrow from the bank?

$ _____

9. Put an A next to the person you would assign to do energy audits. Put an I next to the person you would assign to do solar installations.

_____ a. Erica completed a solar apprenticeship program offered by the sheetmetal union.

_____ b. Bruce was an energy auditor for his state utility company for two years.

10. Which person would you hire as a solar installer?

_____ a. Mario completed a solar apprenticeship training program. He then worked for a solar equipment company.

_____ b. Ted completed an auto mechanic training program. He then worked in an auto repair shop for two years.

11. What is one kind of on-the-job training you might give your employees?

_____

12. Which form will you use to keep track of the work to be done for one customer?

_____ a. Daily work schedule

_____ b. Work order

_____ c. Profit/loss statement

13. Which person's work is probably hardest to schedule?

_____ a. Solar installer

_____ b. Service owner

_____ c. Energy auditor

14. List two things to think about when you set your prices.

a. _____

b. _____

15. List two ways you could advertise your service.

a. _____

b. _____

16. What are the parts of a printed ad?

_____ a. Headline, illustration, copy, layout, identification

_____ b. Illustration, layout, identification, copy

_____ c. Identification, layout, copy, headline

17. Which two kinds of information would probably be on a customer billing form?

_____ a. Payment received from the customer

_____ b. Monthly rent for your office

_____ c. Balance the customer owes

18. Which of these would be in the "Cash Receipts" part of your daily cash sheet?

_____ a. Advertising costs

_____ b. Customer payment

_____ c. Insurance costs

19. Jaime Lopez runs an energy specialist service. One year his records show total income of $100,000, total expenses of $50,000, and net profit of $10,000. Compute the following.

a. Profit ratio = _____%

b. Expense ratio = _____%

20. Jaime's profits decrease the next year. List two things he can do to increase profits.

a. _____

b. _____

21. Jaime doesn't want to raise his prices. What is another thing he could do to increase sales?

_____

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PROJECT PRODUCTS

Entrepreneurship Training Components

Vocational Discipline	Module Number and Title
General	Module 1 - Getting Down to Business: What's It All About?
Agriculture	Module 2 - Farm Equipment Repair
	Module 3 - Tree Service
	Module 4 - Garden Center
	Module 5 - Fertilizer and Pesticide Service
	Module 6 - Dairy Farming
Marketing and Distribution	Module 7 - Apparel Store
	Module 8 - Specialty Food Store
	Module 9 - Travel Agency
	Module 10 - Bicycle Store
	Module 11 - Flower and Plant Store
	Module 12 - Business and Personal Service
	Module 13 - Innkeeping
Health	Module 14 - Nursing Service
	Module 15 - Wheelchair Transportation Service
	Module 16 - Health Spa
Business and Office	Module 17 - Answering Service
	Module 18 - Secretarial Service
	Module 19 - Bookkeeping Service
	Module 20 - Software Design Company
	Module 21 - Word Processing Service
Occupational Home Economics	Module 22 - Restaurant Business
	Module 23 - Day Care Center
	Module 24 - Housecleaning Service
	Module 25 - Sewing Service
	Module 26 - Home Attendant Service
Technical	Module 27 - Guard Service
	Module 28 - Pest Control Service
	Module 29 - Energy Specialist Service
Trades and Industry	Module 30 - Hair Styling Shop
	Module 31 - Auto Repair Shop
	Module 32 - Welding Business
	Module 33 - Construction Electrician Business
	Module 34 - Carpentry Business
	Module 35 - Plumbing Business
	Module 36 - Air Conditioning and Heating Service

Related Resources

Resource Guide of Existing Entrepreneurship Materials

Handbook on Utilization of the Entrepreneurship Training Components